PERIODICAL ROOM
GENERAL LIBRARY
UNIV. OF MICH.

JUL 21 1924

THE JOURNAL OF PHILOSOPHY

VOL. XXI. NO. 15: JULY 17, 1924

CONTENTS

Scientific Thought and Reality: HAROLD CHAPMAN BROWN 393

Book Reviews:

Blondel's La Psychanalyse: F. I. WERTHEIMER 410

Cohn's Theorie der Dialektik: SUZANNE K. LANGER 412

Givler's The Ethics of Hercules: FLORA I. MACKINNON 415

Journals and New Books 416

Notes and News 418

PUBLISHED FORTNIGHTLY
BY THE
JOURNAL OF PHILOSOPHY, INC.

THE JOURNAL OF PHILOSOPHY

All communications to the Editors should be addressed to PROFESSOR FREDERICK J. E. WOODBRIDGE, or PROFESSOR WENDELL T. BUSH, or PROFESSOR HERBERT W. SCHNEIDER, Columbia University, New York City.

Subscriptions and advertisements should be sent to THE JOURNAL OF PHILOSOPHY, Sub-Station 84, New York City. The annual subscription price (twenty-six numbers) is $4.00 and the charge for single numbers is 20 cents. Advertising rates will be forwarded on application.

The Journal of Philosophy is owned by The Journal of Philosophy, Inc., 515 West 116th Street, New York City, and published at Lancaster, Pa.: President, Wendell T. Bush; Treasurer, Frederick J. E. Woodbridge; Secretary, Iris W. Wilder.

Entered as second class matter, March 18, 1921, at the Post Office at Lancaster, Pa. under Act of Congress of March 3, 1879.

A Theory of Knowledge

By C. A. STRONG

Author of *The Origin of Consciousness*

In this book of 100 pages, Mr. Strong sets forth the conception of the nature of mind which in his judgment should underlie the defence of the theory known as "critical realism." $2.00.

For Sale by

The Macmillan Company

64-66 Fifth Avenue **New York**

Vol. XXI., No. 15 July 17, 1924

THE JOURNAL OF PHILOSOPHY

SCIENTIFIC THOUGHT AND REALITY

WHEN struggling protoplasm first attained the structure that makes actual the processes of human existence, or if you prefer, when the Lord God formed man of the dust of the earth, and breathed into his nostrils the breath of life, and man became a living soul, man's exploration of the nature of reality began. This exploration, old but ever new, converts the dry dust of immediate fact into a golden haze of meanings and raises the mechanisms of causal relations to the level of purposive seeking, motivated by hopes and fears, loves and hates. It gives us the conceptualized world of our daily life, in which, if at all, we must sense the glimmerings of the nature of the real.

Primitive and sophisticated experience agree in this: at least, reality is of a nature such that man, through effort, can satisfy, in some measure, his more fundamental cravings. Death he can not escape; disease and sorrow, hunger and fear, he overcomes with varying success. Out of his achievements perspective enters into his environment. Reality has not the dull uniformity of black night on a boundless plain. It is filled with sharp contrasts, contains numberless points of contact between man and what is not man. According to man's behavior with respect to these contact points, his efforts are furthered or rendered vain. Contrasts within reality, interpreted by thought, give rise to a conceived world of objects, a world in which man as an object seeks and avoids other objects as they seek or avoid each other. Further experiencing, trying out, this world, these objects become ranged, on the basis of their resemblance in behavior to himself, in the series leading from other men to indifferent things. Fleeting visions of order and apparent dependence arise and wider experience generalizes the dawning conceptions of lawfulness and causation. Then science is born.

The primitive world is this world marked out within the diversity of the real, by need-driven experience, the world of men who hunger and thirst and experience the lusts of the flesh. Since co-eval in man with the elemental cravings that give it form, are emotions of hope and fear, trust and distrust, so co-eval is a second interpretation of reality as a world co-operative or indifferent, friendly or hostile.

But reality gives no such unambiguous replies as shaped the world of things to questions so generated, hence man lets himself dream and tends to hold a satisfying dream as the eternal scheme of things. Thus mythologies arise to justify to him those attitudes toward reality that experience has fostered.

As acquaintance increases, insight into the orderly character of experience deepens. The belief in an universality of law and an omnipresence of causal connections prospers. Freedom in myth-making declines. Art comes to take upon itself the function of disclosing the capacities of emotion and the possible emotional significances of objects. Besides it, science develops the practical interpretation of the real. Nevertheless, for tender souls, or those stricken with adversity, there remains a cleft between the world of daily life and that in which emotion can find peace. For them arises a belief in two world orders, the one temporal, the other eternal; the one attained by reason, the other by faith. These worlds the mystic unites in ecstatic vision, the theologian in the gossamer logomachy of apologetics. But such unities are won at a price; they demand the subordination of verifiable realities, marked out in response to the primary questionings of life, to unverifiable realities shaped by the needs of hope and fear.

This antithesis of the actual and the desired also generates philosophy. Where the theologian accepts it as inevitable and subordinates the world of things to God, the philosopher must ask if it is real. The history of philosophy is the history of answers to this question, and philosophy may be the ally or the antagonist of dogmatic religion according to the nature of its reply. Hence philosophy is no mere scientific discovery. It is the product of the experiences of an age, of its scientific faiths, of the events that arouse its hopes and fears, and of the temperament of the philosopher that gives it articulation. It is a commentary on the experiments of mankind in search of the good life. Hence there is, historically, an inverse ratio between man's confidence in his own successes, won by living the life of intelligence, and the intensity of his search for some transcendental reality in which the crooked shall be set straight.

Our age is dominated by science. The idea of applied science, scarcely three centuries old, if we except the premonitory dreams of the monk, Roger Bacon, has brought an accelerating and spectacular transformation of our daily lives that tends to generate in us a faith in the all sufficiency of such knowledge. The separate fields of the sciences, radiating out from the nucleal points of contact of man and the world, are fusing into one great field until it seems as if every phase of the nature of the real might find its place therein. It

is a natural phenomenon that contemporary philosophic thought should tend to center about scientific achievement.

One fact, however, arouses questionings. The very processes through which science has extended man's contact with the world, widened the significance of the real for practical life, dispelled fears, and encouraged hopes, have broken down traditional concepts of long standing, and suggested strange, new ways of thinking. Before the onslaught of investigations, and while we are still hardly at home in evolutionary conceptions, the too, too solid flesh of the atom is melting into a nebula of electrons, and under the assaults of the theory of relativity, space and time seem about to fuse into a semblance of cosmic drift. This can not but arouse uneasiness in the philosopher, hence so much of the energy of contemporary thought is turned to questions as to just what our fundamental scientific ideas actually mean. To what extent is the world of science something given, and how far does man, the industrious spider, spin his web from his own entrails to feast on the struggling fly or rejoice in the sparkling dew caught in its meshes?

The ease with which seemingly established knowledge has been cast by the board prompts us to question generally the distinction of knowledge and belief. A philosopher, Descartes, once sought for an indubitable fact and found—his own existence. And this was hardly a discovery, but rather a consent to call two things by one name, the present moment of consciousness and existence. Yet this seems to be the beginning and the end of unquestioned knowledge. Beyond such wisdom, we have only suggested patterns of reality that, with more or less confidence, we accept as guides to action. The degree of our confidence is incorporated in such relevant terms as knowledge, theory, opinion, belief, or guess. The confidence itself has its roots partly in seeming successes of the past, partly in familiarity, and partly in the congeniality of belief with aspiration.

Since the terms "knowledge" and "belief" thus signify degrees in the readiness with which we accept ideas as bases for action, the roots of both knowledge and belief lie in those conditions whereby that readiness is determined. The most primitive root is intensity of emotional craving. This is the life of beliefs in the powers of rainmakers, in the driving out of disease by charms, and in the propitiation of evil spirits. Perhaps even it is the root of our recent faith in war to end war, to make the world safe for democracy; and surely it colors the current faith in administration as an universal panacea for all educational and social shortcomings.

Spontaneously derived, such beliefs may become transmitted in our social heritage and soon, sanctified by familiarity, take an effective place in the body of accepted knowledge. The stormy sea of

reality may buffet them about, or the siren song of experience may tempt them toward destruction, but, like Ulysses, bound to the mast, they stand inviolate. If a criterion of the progress of civilization were required, it might be found in the increase of the range and readiness within and with which men consent to dislodge these Idols of the Tribe at the behest of experienced realities.

The emotional need of attaining ends is generally complicated by a sense of success or failure. Thus rival feeling-beliefs become vivid or fade in the light of experience. They may be supplanted by fact-beliefs rooted in observation and verification. Such beliefs, on which the seal of experience, as of a notary, has been placed, constitute what we dignify by the name of scientific knowledge. Yet they have not thrown off the taint of belief. Verification is ever incomplete. We must extend evidence drawn from what is here and now, to what will be or has been at other times and elsewhere, and this extension can only be justified by the successes of similar extensions. They have not even wholly escaped the taint of feeling. Poincaré makes the love of beauty, the craving for harmonies, the chief impulsion to scientific endeavor and, perhaps, the formative cause of intellectual advance. In facing scientific concepts, it is easy to forget these accidents of history, the love of order, and the hopes of fame, that have been wrought into their structure. A Darwin may record hostile evidence with which to combat the appeal of theory, but humanity will not record it, except under compulsion.

The philosophy of science must, then, take account of conditions under which scientific beliefs have been formulated and established, in its search for meanings. It must note the history of concept formation, how out of the " booming, buzzing confusion " of elemental experience there gradually emerges a world of things, distinguished as the " I " and the " non-I "; how the " I " as a restless doer, the active energy of the body, comes to shape its action to the attainment of states of satisfaction and symbolizes its successes and failures in a network of related concepts that half represent contacts with the Not-I, and half represent programs of actions it has found good.

The structure of language also plays its part in this adventure. If Greek had been Chinook, probably we should never have had the Aristotelian table of categories. Many of our scientific distinctions are inevitable from the nature of things, and would have received recognition in any speech forms. But may it not be that the distinction of noun and adjective has lured us into that exaggerated distinction of substance and quality that philosophy and science have yet to live down? What may not the noun have contributed to the plight of space, time, and matter, now under the assault of the relativity theory? The Idols of the Market Place may arise from the

forms, as well as from the contents of language. They are due not only to the emotional coloring words acquire in the wear and tear of tradition, but also to connotations derived from their grammatical status.

Of all the sciences, psychology is most easily led astray, for it is most closely related to man's concept of himself and of his own worth. Without the sanction of religion, no evidentiary grounds would have brought it the Cartesian distinction between mind and body. The appeal of this dogma lay in the tradition of the soul, and in man's longing to retain the privileged place, as man, from which the earth, his dwelling place, had but recently been dislodged. A good scientific concept brings us into closer contacts with reality, increases our power of prediction and control. Psychological dualism has brought with it no verifications. It has not even suggested fruitful experiments. Rather, it has been a stumbling block, forcing the scientist into continual circumlocutions to give the semblance of scientific coherence to the data he actually has.

Only in the field of philosophy, where the perspective of emotional significance is added to the scientific perspective of relevant effects, has it even superficially prospered. And here, is it pathetic or comic to see Berkeley, and the long line of idealists after him, using just those experiences that psychology should explain, to deny the reality of the experiences themselves, or rather, since Berkeley must attribute them to some cause, substituting for the concept of an objective world, that of a divine mind, as if the change in nomenclature could in some way alter the character of the real, or the forms of its presentation? All that is actually accomplished is to substitute for a reality that might in some measure be fathomed by experience a conceptual entity whose attributes are predetermined by dogma: this, and the addition of an emotional connotation dear to man. The problem of the nature of reality is circumvented with a word. It would be simpler, and quite as satisfactory to reason, to call the unknown, or the unknowable, God, as Mr. Bradley accuses Herbert Spencer of doing, because we "don't know what the devil it can be." I know no better example of the danger in uncritical acceptance of scientific conceptions and developing them under the guidance of the heart.

There is an almost equal danger in the acceptance of scientific concepts abstracted from the facts that gave them birth and the elaboration of their consequences in terms of a preconceived logic. It is one thing when a concept is held tentatively by a scientist and its consequences are deduced for the purpose of further observation or experimentation, but it is quite another when it is detached as grist for the logic mill and the results served up as a theory of real-

ity. Yet this is exactly the procedure of Spencer, Bradley, and others, who argue from inconsistencies that they develop in concepts abstractly defined to the unreality of the denotations of these concepts when concretely defined. Since their logic is, after all, only the logic of consistency, the least significant although the most general form of logic, it would have been far simpler and more useful if they had concluded that the concepts from which they started had been badly formulated and had utilized their energies and skill in trying to discover just what facts were actually intended and what significance was implied by them as to reality.

The preference for empirical method, so potent in contemporary thought, is doing much to protect us from distortion of fact by hopes and fears, and from the beguilements of language and logic, but British empiricism has inherited unfortunate entanglements with psychology that give cause for reflection. The situation is the more acute since such entanglements are sanctioned by Henri Poincaré, the most brilliant and the most profound of the scientists who have turned their attention to the philosophic aspects of their subjects, and since it is an assumption of that vigorous group of British realists—Russell, Robb, Whitehead, Broad, Alexander, and others—who are struggling so valiantly to win for us a better understanding of our knowledge of the physical world. Hence it is on reflections about this assumption and its results that I wish to throw the main emphasis of this paper. For convenience, I shall refer chiefly to Mr. Broad's recent book, *Scientific Thought*.

If we are to draw conclusions about the nature of reality from scientific knowledge, we can not depend upon the use of "vague and unanalyzed concepts" but must try to reduce them to their "cash values,"—Mr. Broad's phrase, as it was that of William James. This is equally true, whether the concepts in question belong to sciences of the physical, biological, or psychological group. The burden of this task falls to what Mr. Broad calls "Critical Philosophy" and I shall adopt his term. That we confine ourselves for the time being to concepts drawn from the physical group is an accident and not an essential of the method.

There is widespread opinion that psychology occupies a peculiar privileged position in an investigation of this sort. Mr. Broad's explanation is: "When we try to clear up the meanings of physical concepts like *place, date, matter, etc.*, we often find that a reference to the process by which they come to be known is essential and that they owe part of their obscurity to the abstractions which science and common sense have made. Thus . . . we do constantly have to appeal to facts which belong to psychology, even when we are not primarily dealing with psychological concepts."

To me this statement involves a fundamental confusion. Reference to facts that are the raw materials of a science does not authorize critical philosophy to use, uncritically, whatever interpretations that science may have put upon them. Agreed that in seeking for the "cash value" of any scientific concept we are obliged to consider the conditions under which it arose, the experiences that have modified it, its exact implications as to those experiences, and the grounds for confidence in it. This is, I think, the equivalent of the "process by which it comes to be known." Granted also that there are some facts in this account which the psychologist might interpret and explain, it does not follow that psychology has any privileged place in our account. Its interpretations might even be irrelevant. Who would say that forestry has a peculiar and privileged position with respect to understanding the concept of a sinking ship because the ship happened to have been made of wood? Or that physical chemistry is privileged with respect to the understanding of a water power, because water, in the last analysis, resolves into electrons?

It is, of course, true that experiences with reality have led us to classify some facts that are met with as subjective and others as objective. If the behaviorist objects to the term "subjective," he can substitute the phrase "a part of the reaction processes of the organism and not of what initiates those reactions." At first contact, we may not always be sure to which category something presented belongs. Since psychology is particularly interested in subjective experiences, the conditions under which they arise, and their relations to each other, the psychologist has acquired skill in picking out such data. He has a fund of information that may occasionally save delay to the physicist by informing him that a certain phenomenon is optical, or due to autosuggestion, and not to be described in terms of the actions of light waves. But this gives him no privileged position with respect to physics.

Furthermore, psychologists have unfortunately fallen into a form of abstractionism dangerous to philosophy. The traditional theory of dualism of mind and body, tracing the first mental effects of a stimulus to a sense organ, developed a concept of sensations as a first product of the process. Then, since past experiences make a difference in the result, a process called perception is invoked, and the result is the fiction of a mental picture, a sort of mosaic in which the elements are furnished by sensation, and their perspective effects introduced by perception, to which is added some sort of projective activity, whereby the total result is taken as standing in mind for something objective in the physical world. Critical philosophy should investigate these concepts carefully before using them.

Let it be noted: these concepts are developed to explain the proc-

ess of how we come to see an object, and explanation of how a process takes place has no effect on the character of the result. Hence they should have no value for a critical philosophy directed at the interpretation of physical concepts. The meaning of the physical statement, "My blotter is square," is quite independent of the psychologist's explanation of the nature of vision or touch, or of taste or smell. Nor is it modified by his explanation of the working over of sense data by some perceptive process. He may warn me that conditions are such that I am probably mistaken, for which warning I should thank him, and seek further verification of my meaning. The meaning itself, however, say of squareness, is independent of processes of any particular sense organ or perceptive activity. It may, perhaps, be better understood from examining the situation out of which the idea of squareness emerged, but this investigation does not involve the explanation of perception.

A practical objection to the direct use of psychology for the purpose of making clear the meaning of physical concepts, lies in the fact that psychologists have not as yet sufficiently developed their own subject to have a clear and accepted set of concepts relevant to the processes in question. Hence if the philosopher wishes to develop his analysis in psychological terms, he must establish his psychology as he goes along. This has been done by the British realists, and I ask your attention to the consequences as they appear in Mr. Broad's work.

The fundamental concept involved in his analysis, or rather created for it, is the *sensum*. It is, perhaps, sufficient for our purpose if we omit to cite the logically constructed definition and merely point out, as examples of *sensa*, the elliptical appearance of a penny lying on the table, or the bent appearance of a half-submerged straight stick. We are all familiar with such elliptical-appearing pennies and bent-appearing sticks. This critical philosophy uncritically accepts the terms *appearing* and *appearance*, although these terms might seem to call for analysis. By an hypostatized abstraction, the fact that these objects appear as they do is erected into the dogma that gives body to the *sensa* and makes of them entities of which we must ask whether they are in any way mental. We then enter a curious mixture of psychological and logical discussion, that repeats the ontological problems that have historically been inherent in an assumption of psychological dualism, without arriving at any complete solution. The trick seems to be to develop a highly complex situation and say "this awaits solution from the symbolic logician."

It would be aside from the present purposes to follow the details of the argument, but I cite a few conclusions by way of illustration:

Sensation is often, perhaps always, analyzable into an act of sensing and a sensum. It is quite possible that *sensa* should exist unsensed, yet *sensa* may be to some extent mind dependent; we can't prove it, but we have to believe in the existence of a world of physical objects, and the relating of the world of *sensa* to the world of physical objects is "a winter's evening's pastime for symbolic logicians."

There are two possible theories of the origin of *sensa*. One is that they have been produced as unsensed *sensa* by occurrent conditions and are then selected in some fashion by the act of sensing; the other, that they are somehow created in some unique fashion related to the occurrence of brain events. Mr. Broad prefers the selection view, although he does not consider it demonstrable. It is, he asserts, open to the objection of implying an enormous number of unsensed *sensa*, not merely where there is no observer, and for objects like ultra-violet light, but it implies that "wherever in the physical world there is some single physical process going on, all the qualitatively different *sensa* must exist that any observer, no matter how abnormal his body, would perceive there." Also there is the further difficulty that a thing to be real must be somewhere and some when,—these terms are Mr. Broad's—then "either (1) sensible determinates (such as some particular shade of red) do not inhere in regions of physical Space-Time; or (2) . . . if they do inhere in regions of physical Space-Time, they must inhere in the latter in some different way from that in which physical determinates (like physical motion) do so. Either there is one sense of 'inherence' and many different Space-Times, or there is one Space-Time and many different senses of 'inherence.'" Here again is a problem for the symbolic logician, if we are to combine *sensa* and physical events into one universe.

Now I greatly admire the subtlety with which Mr. Broad has worked out his distinctions and the guarded character of his conclusions—characteristics my summary selections have not indicated. But I seem to remember a statement of Giordano Bruno to the effect that if the first button of a vest is buttoned wrongly, the whole thing sits askew. At the risk of my comments being damned as belonging to some of the "cheap and easy realisms" that Mr. Broad says are produced in such numbers on our side of the water, I am going to attempt to indicate how, by the correct method of critical philosophy, many, if not all, of Mr. Broad's difficulties are side-stepped. This criticism is based on the point made earlier in this paper; that if a philosopher is to try to get at the cash value of scientific concepts, he must not assume the findings of any particular science at the outset. Granted that critical philosophy can make our ideas more clear, it can not do so by discussing them in terms that are unclear. The unknown can not be explained by the unknown.

Let us come back to the question of the elliptical-appearing penny. In this case we must beware of the psychologism in assuming that the situation implies an object, an abstract visual process, and a mental picture. Let us try to put such knowledge of psychology as we have behind us, and start with naïve common sense. Note first the whole situation, that what I am seeing is a penny on a table in front of me. I am sitting in front of the table, and the penny distant about the limit of my reach. The previous experiences, and the processes by which all these words have attained the meanings they now have, are for the moment irrelevant. I am experiencing a penny in a certain position relative to myself. If we begin to be analytic, to what should we attribute its elliptical shape? The principle of concomitant variations states that if two things vary together or inversely there is some sort of intimate connection between them. This suggests that the experience of the elliptical shape is in part, at least, the experience of a special relation between me and the penny, for as the position of the penny changes, so does the character of the ellipse that defines the shape.

I may also discover that shape is partially an experience of the character of the medium by which the light waves are transmitted and of the condition of my eye. All of these factors are objective, and normally all but the positional relations are irrelevant. If a bit of very bad glass intervened, or if I were very near sighted, I should see what a speech contraction calls a blurred image of a penny, *i.e.*, a component of my shape-experience would be the experience of light distortion by bad glass or a defective eye.

The word " image " here merely covers an unreadiness to point out exactly of what the blurriness is an experience. It refers to an unusual situation. Most frequently the mere positional shape of the penny is an adequate guide in dealing with it. If, unnoticed by us, these other factors are brought into play, we make mistakes, we fail to deal correctly with what is experienced. Now as a part of the process of reducing terms to their cash values, let me ask you to watch this word " image " and observe whether it is not always such a circumlocution to avoid specifying the exact fact experienced.

To come back to the shape of our penny. It would be over-hasty to conclude that since the term " elliptical shape " refers to the penny in a positional relation to me, or to some other object, therefore the term " real shape " denotes nothing but some conventionally selected positional shape. The term " real " always bears some reference to being taken account of by action. All positional shapes are then real, as any marksman must know, just as real as the real shape, if you will permit the bull. In one particular case the circle, which we call the real shape, may be also a positional shape.

The circular shape is, however, something more than a mere favored positional shape. To avoid entanglements with the word "reality," let me call the circular shape of the penny, commonly called the *real* shape, its *objective* shape. The importance of ascribing such an objective shape to the penny is that, knowing it and nothing more, I can predict any positional shape the penny might present with respect to me or any other observer or object, and the effects of any defined medium that might be introduced between any observer and it. Knowing only a positional shape, it would also be necessary that the relation to the object of reference with respect to which it had that shape be defined before other positional shapes could be predicted. This determination would be a problem of projective geometry. In other words, what we call the objective shape of a thing is the shape-description of it that enables us, without any other information, to foretell the most about it.

Now, I do not think it is wise to create such a term as *Sensa* to apply to experiences like that of the elliptical penny. In the first place, it suggests that the processes of sensation may have something to do with determining positional shape, while the existence of projective geometry indicates that such shapes are quite independent of the character of such processes. In the second place, it leads to such conclusions as that physical objects are composed of *sensa*, some unsensed, and it is obviously ridiculous to think of the penny as in any sense composed of the positional shapes that are projectively determined by its relations to various points of reference. It is not an objection to the description given above, to point out that genetically our experience of positional shape is not native, but an acquired synthesis of the effects of various sorts of sense contacts such as vision, touch, *etc.* Nor is it an objection that in particular instances we may not be sure whether we are experiencing a positional shape or an objective shape. Against a neutral background we might easily be unable to determine, without the direct contact of touch, whether a card was elliptical by position, being tipped, or objectively, being perpendicular, to the lines of vision.

The only other reason I can see for talking about the *sensa* is the shadow of psycho-physical dualism. We have certain experiences known as dreams, hallucinations, visualizations, and the like, that have given rise to the notion of mental images. Recall the suggestion that the word "image" is a circumlocution to avoid specifying exactly what is experienced. In these cases it certainly seems to be so. There are grounds for distinguishing what we call objective and subjective regions of experience, that is, conditions to which we react only when some peripheral sense organ is stimulated, such as hearing, sight, touch, taste, and smell, and conditions to which we

react where we can not, as yet at any rate, prove that a sense organ is involved. Tradition assumes that these latter conditions are somehow like objective ones that would affect us in a similar way. In the case of dreams, at least, Mr. Broad seems to think it very doubtful whether this is true, except in the case of vision, that is, the case of what are popularly called dream pictures, a special case of visual imagery.

It would be beyond the practicable scope of this paper, and in the present state of psychology, very difficult, to trace the terms involved in talking about these image phenomena back to their cash values. For our present purpose the following considerations must suffice. Whatever degree of resemblance or difference may be established between these objective and subjective conditions of experience, it is practicably possible, in most cases, to decide whether I am seeing a red box, imagining a red box, or dreaming a red box. When philosophy is investigating the concepts of the physical world, only the first of these situations is important. When critical philosophy turns its attention to psychological facts it is time enough to investigate the last two. If the sensum concept then becomes necessary, it can be introduced. I do not think it will be—but that is another story.

We can, for the purposes of physical science, deal with the redness of the box exactly as we dealt with its shape. Just as we found experienced shape to include experience of relations of perspective, so color experience is an experience of light, its refractions, reflections, and absorption by surfaces. In a given case, we can easily make a mistake as to what is experienced. The famous, or infamous, bent stick is an example. We may think that we are experiencing a bent stick. We are really experiencing a straight stick and the refraction of light. But to return to the box, this analysis does not mean that the box is not red, but only that it is red under certain conditions.

Again, we might have an added complexity to this experience by inserting a blue glass between us and the object, for we should then be seeing a red box through a blue glass and might easily confuse the glass-color aspect of the experience with the box-color aspect. The box may be really red, and the glass really blue. The fact, if it is one, that the red or the blue sort of experience may arise in dreams without the eye being stimulated, does not prove that the box experience is a projection of such a subjective state when a stimulated eye is involved.

Just as we distinguish objective shape from positional shape, we can also distinguish objective colors—the box exterior as reflecting certain light waves in a specified direction—from apparent color, or

this color, as affected by mediums of transmission intervening between it and us or some other object. Color, itself, although in a lesser degree than shape, has a positional reference and is less stable, since even what we call the real color is a joint product of light waves and a surface. In my opinion this ready variability is the basis of the strong prejudice in favor of making color a secondary quality.

The point I wish to make at present is, that if it is argued that we must distinguish a class of *sensa* because of the subjective appearance of colors, sounds, and the like, in dreams and hallucinations, we can reply that *sensa* based on these experiences are not necessarily involved in those objective experiences with which science is concerned, and can not be invoked to play any part in reducing our description of them to its cash value. From the point of view of this problem, in fact, the concept is practically confusing and logically to be condemned as generating hypostatized abstractions.

Without prejudice as to the question whether, or in what sense, in analyzing psychological concepts we must conceive taste, smell, feelings of hot and cold, and the like, as subjective and giving rise to *sensa* as objects of an act of sensing, in relation to concepts of the physical world, space, time, matter, and motion, we can conclude that the concept of the *sensa* is entirely superfluous. Judging by Mr. Broad's procedure, it is also productive of needless dialectic puzzles and of a tendency most pernicious among philosophers—the tendency to invent science by the aid of logic to build out gaps that concrete empirical investigation has not filled. Some examples of this procedure will be given later.

We might be strongly impelled to adopt the concept in spite of objections, if it in any way simplified our interpretations of physical concepts. Remember that the problem of critical philosophy is to ask by what right we base on the characteristics of experience (Mr. Broad here uses the phrase " qualities of the sensa ") the judgments about physical fact that we do base on them. If we adopt the *sensum* theory, this becomes a problem of analyzing various sense-fields, in particular, vision, touch, and kinæsthetic sensation, to discover how much of such concepts can be discovered in the isolated experience of those fields, and how the discoveries in the various sense fields of one observer, and in parallel fields of many observers, can be combined into a single conceptual interpretation.

Does not the very statement of this problem make evident its *hysteron proteron?* In the first place, the conception of these special sensory fields is a bit of highly sophisticated psychological interpretation. Our ideas of the world are consequences produced coöperatively by contacts through all the senses, and while some par-

ticular sense organ, such as the eye, may be peculiarly relevant in a particular situation, it does not follow that there exist data of pure vision adequate to the interpretation of the meaning of this contact.

For example, it is empirically true that an object looks wet, or slippery, or smooth, just as truly as it does green or blue. It is interesting, particularly to a painter, to note just what light effect makes it look that way, but we need not be tempted to seek some visual *sensum* with a wet or slippery quality. In other words, to an adult, or even to a child after a few minutes of life, no experience is the effect of a single sense contact acting in isolation. It is practically interesting to note the sense cues through which these coöperative results are invoked for they do not always function correctly, and we may profit by such a judgment as " that looks slippery but it really is not. The slippery look is merely the effect of a peculiar reflection of light. The look is a real characteristic of the road as seen from this point but, nevertheless, you won't slip on it."

The same analysis applies to our perception of spacial dimensions. There is no reason to suppose that a Condillac's statue, if endowed with vision alone, whatever that may mean, would have any idea of dimensionality whatever. Single sense fields, such as Mr. Broad assumes, are as remote from reality as the famous economic man or the former favorite, but spoiled, fictitious child of the psychologist. Such inventions always have just those characteristics that the needs of some theory demand.

Out of this situation develops another objection to Mr. Broad's assumption illustrating a point previously made: the tendency of such conceptions to develop an insecure filling-out of scientific knowledge. For the sake of his argument Mr. Broad is obliged to assume an immediate quality of visual solidity and depth that many psychologists would reject. Since a purely visual presentation, unaffected by the previous experiences of other senses, never actually occurs, what right has critical philosophy to assume that these qualities are given in such presentations? Is it not stacking the cards so that a winning card can be drawn later?

The discussion is, however, better than such assumptions suggest, for Mr. Broad is willing to admit that traces left by past experience can coöperate with present stimuli to produce the observed qualities of sensa, although he somehow misses the point that they always do coöperate, and that, since our scientific concepts are formed on the basis of this coöperative result, critical philosophy does not need to go behind it to solve its problem—that is, the assumption of the sense-fields is an unnecessary and illegitimate fiction.

This conclusion is especially evident when we come to discuss the concept of time. The discussion leads to the necessity of defining the "simultaneity" of two events in the sense histories of different observers. Here the whole scheme of the *sensa* and of sense histories is abandoned. A definition is sought through relations to common objects, just as common sense would seek it. Then the relativity theory is traced to experience in its proper sense, and a valuable contribution to critical philosophy is made. The *sensum* theory has added nothing to this.

I think it must be some psychic drive, perhaps the manifestation of some Ego complex, or is it excitement from intellectual torture, that makes philosophers generally so scornful of anything that can be called easy, or can be referred to common sense. Easy thinking is often mistaken, and common sense needs careful investigation, but there is no sound *a priori* reason for assuming that everything easy is bad, or that all conclusions that are not common sense are sound. Scientific thinking may be viewed as common sense subjected to criticism. I have never heard "difficulty" or "opposition to common sense" cited as a merit of such thinking. Rather, when such things occur, they are treated as more or less tragic events to be faced with courage, as are many other tragedies of life.

There is one further reaction to the consequences of current psychological assumptions that I am going to state, a reaction that I tremble to formulate since my brother philosophers will now turn against me, if they have not done so already, as it strikes at the roots of one of their most cherished problems. Mr. Broad, throughout, assumes the existence of a world of independently existing physical objects. He insists that the existence of such a world can not be proven, but also affirms that we can not get along without assuming it. More precisely, he asserts that we can not prove the existence of a world of entities having the constitution and properties of physical objects. I am going to challenge this statement, and by virtue of the very method of critical philosophy that he himself has defined.

Let me ask first, what is the meaning of the phrase "to prove"? There are two generally accepted methods of proof, deduction and induction. In deductive proof we proceed by showing that a certain conclusion follows from accepted premises, and we do not need to accept the conclusion of such proof unless we accept the premises. These premises are derived either from intuition or from observation and induction. The only method of testing an intuition, so far as I know, is observing that you believe it. For testing an intuition in others, you can observe whether they always act as if they believe it. Actions are proverbially a surer clue to a man's beliefs than words;

for his professions of belief are often motivated by emotion and may make for self-deception or the deception of others.

All philosophers have admitted that men must act as if there were an independent world of entities having the constitution and properties of physical objects. Then it is only reasonable to assume that they have belief corresponding to such an intuition, if there is any such. Consequently, for those who like proofs from intuition, or from deductions based on intuitions, there is as much evidence that men have this intuition as there is for ascribing any other to them, especially as even those who deny having it have to act as if they had it.

For myself, I have very little interest in proofs from intuition, whether deductively elaborated or not, and whether relating to an external world or to anything else. The only alternative is to seek proof from induction, either directly or as a result of deductions based on inductive premises. We have, then, to ask what is the nature of the inductive proof of an external world? This also involves a preliminary question as to the general conditions under which we consider an induction as established. In the light of earlier comments on the relations of knowledge and belief, you may recall the assertion that the transition from belief to knowledge occurred when we found ourselves provided with an interpretation of experience that had been verified in all its relevant applications, in so far as such verifications are possible, and such that there was no alternative interpretation capable of equally wide and satisfactory verification. Now the existence of a world of independent entities having the constitution and properties of physical objects is just such a verified hypothesis, in the same sense that there are any verified scientific hypotheses, and, in consequence, can be considered proved in any sense that any thing can be inductively proven.

Obviously, the validity of any such hypothesis depends upon the meanings assigned to its terms. Perhaps Berkeley was right in denying the reality of matter, if by matter is meant the sort of substance that changes while its attributes remain unchanged, as is implied in the dogma of the Transubstantiation. He did not, after all, deny the objective validity of the concept of a physical world as an independent reality, but merely asserted that the reality it represented was God, and that of God's ideas it was a true interpretation. The objection to Berkeley's conclusion, if his terms are conventionally understood, is that through the changed name qualities become attributed to reality that not only are not verified in experience, but that are not even compatible with it.

I think the meanings of the terms of this proposition in which we are here interested are not difficult to set forth in such fashion that

it shall be valid within the limits of inductive proof, but the task of doing so would be beyond the limits of this paper. To avoid one possible objection, however, this explanation may be pertinent: When we pass, as in the history of science, from the concept of an object to that of an atom, or to that of an electron, we are not rendering our previous concepts false in any respect in which they were verified. We are merely gaining a greater intimacy with reality that enriches our knowledge of its nature. It is contrary to all historical experience to expect a final or absolute terminus to this sort of progress. The dilemma, as I see it, is then this: either all proof is impossible and the word itself a mere *flatus vocis* standing for nothing intelligible, or, in clear and definable meanings of the terms, an independently existing real world is as well proven as anything can be. Let the dialectician do his worst!

Now as to the general problem of the nature of reality: aspects of this nature are disclosed in all the facts of which we take account whenever we act. All of our scientific concepts are interpretations of it, in so far as it is relevant to certain problems of prediction, that is, of knowing what is likely to happen under a given set of conditions. The whole field of human knowledge embodies our knowledge of reality. It tells us that reality is just the kind of thing that can be handled in certain ways with results that may be foreseen. But this is usually not a sufficient answer for a philosopher. He is fond of talking about the problem of the world as a whole. By this he usually means, is nature fundamentally moral or purposive? Is it kindly disposed to human aims? Or is it hostile or indifferent?

To answer the first question, "is reality intrinsically moral or purposive?" it is only necessary to apply critical philosophy to the discovery of the cash value of the terms "*moral*" and "*purposive*" and a little effort at verification will render the answer clear.

The second question is a little more complex. It requires us to keep in mind that man is as real as the world of physical objects, and that the realization of aims is a process that takes place by virtue of interactions between him and the world. Failure may be due to either party in this interaction. Man may starve in the midst of tropical plenty; for the fishes will not of themselves jump into his mouth, or cocoanuts climb down from their trees to assuage his hunger, but if he has the energy of a hunter he may thrive in Arctic scarcity.

That man exists proves that reality is of such nature as to make his existence possible. The existence of science, art, invention, and discovery is evidence that he can satisfy many of his more subtle needs. The tender-minded may seek guarantees of the union of goodness and happiness; now and then some pessimist or sick soul

may lay down his life as of insufficient worth, but for the courageous and the healthy-minded, the world provides exactly the fighting chance that is needed. For them there is no *problem,* but the *fact* of a favorable world. We are daily learning more about man's nature. We are increasing our control over health. We are beginning to understand the more delicate processes involved in mental attitudes. When we can also master the handling of social relations and institutions, there is fair hope that we can create a human world, in the midst of the physical world, that shall justify Leibniz's characterization as the " best of all possible worlds." This also would manifest the nature of reality. But whether or not such dreams find realization, any significant interpretation of the world as a whole can only be inductively derived from the relations of man and the world as tested by his successes and failures both in the mastery of nature and of himself. In him faith, too, has its place, for as James was fond of insisting, faith, as a form of self-confidence, is not merely retro-active, but may be of significant moment in determining the outcome of endeavor.

HAROLD CHAPMAN BROWN.

STANFORD UNIVERSITY.

BOOK REVIEWS

La Psychanalyse. C. H. BLONDEL. Paris: Felix Alcan. 1924. Pp. 249.

It is an interesting fact which can not be easily explained that in France where Freud received his basic inspiration, psychoanalysis has gained extremely little ground. If any proof is needed for the inadequacy of the explanation by a psychoanalytic enthusiast that " psychoanalysis has not yet learned to speak French," it is offered by Professor Blondel's book. In the first part of this book the author gives a clear and brilliant representation of psychoanalysis. He restricts his subject to the presentation of psychoanalysis as a systematic doctrine, with subordination of its clinical aspect. Accordingly, he does not include Freud's clinical papers in the literature he uses. A quotation might illustrate his felicity of expression. Talking of the conception of resistance, he says: " Les résistances sont, pour ainsi dire, les reliefs qui marquent au psychanalyste dans le champ mental la place des refoulements " (p. 85). He starts from Freud's interpretation of certain mistakes in our actions. The analytic conception that these acts have a meaning often derived from tendencies in the unconscious he regards as the dividing line between Freud's standpoint and his own. It is logi-

cally necessary, he feels, to grant this hypothesis to be able to proceed to examine Freud's theories of dreams, of neuroses, of infantile sexuality, and of mental life in general.

The second part of the book contains the author's critical reflections which on the whole are less fortunate. He feels that psychoanalysis has to be judged as a whole, in its method, principle, main ideas, and fundamental results; one has to " vote for or against it." The fact that he personally " votes " against it is of less interest to the reader than his critical arguments. He believes that since the doctrine started from researches about hysteria, the basis of the whole elaborate structure of psychoanalysis is taken away by the fact that the clinical conception of hysteria is full of problems and " that we know much less about this subject than one thought one knew about it thirty years ago." He quotes Long and Jacquin, who do not use hysteria any more, as a diagnostic designation and Chaslin, who reports that he has hardly seen five hystericals in the Salpêtrière in eighteen months. Against this, one would simply have to say that, although hysterical conditions are certainly not well circumscribed, experienced psychiatrists who recognize certain psychopathological conditions as hysteria are the vast majority. Blondel's claim that hysteria occurs only in a special milieu, *e.g.*, in soldiers, is not borne out by clinical observation. Cures by psychoanalysis are no proof to him. He believes that hysterical symptoms often disappear by themselves. The underlying morbid disposition always remains and can not be modified: " I do not believe any more in the transmutation of characters than in the transmutation of metals."

Freud's determinism in mental life he regards as a theory without any possibility of verification and therefore as not being a scientific hypothesis. Psychoanalysis uses a historical succession of events and therefore, like history, it is not a science, because these events can not be repeated as in a scientific experiment. Moreover, just as a historical exposition is never complete, so a psychoanalytic examination can never be completed, for there is no criterion to show when " all the necessary unconscious has been recalled to consciousness " (p. 145). Either the patient is cured: this can not be taken as a criterion because he might have got well by himself; or he " disappears because he has enough "; or he accepts the interpretations of the analyst.

The unconscious in psychoanalysis is for him only an " étiquette mobile " (p. 147); if it is taken away from unconscious psychic processes they become conscious and can be expressed in language, whereas one would expect an intrinsic transformation of psychic processes on their transition from unconscious to conscious. Ac-

cording to Blondel, Freud's libido constitutes something new, not on account of the importance given to sexual libido, but on account of the proportions assigned to it. On the other hand, he believes that Freud exaggerates the rôle of the libido in the etiology of the neuroses. He gives as a very unconvincing example his experiences with the French army in the orient during the war. Instead of Freud's conception of libido, he prefers to regard the sexual as a " prelogical category " regulated by the law of participation in the sense of Lévy-Bruhl. The disturbances of the sexual libido are for him not the cause of neurotic conditions, but the first manifestation of a morbid constitution.

On the whole, Blondel's criticism is more dialectical than profound. In the last paragraph of his critical reflections he can not be taken seriously. He compares Freud to a well-known pornographic writer who at first was accepted by a French literary review of high traditions as being guided by philosophical intentions, only to be discretely dropped later, when the real nature of his stories became more evident.

In the last part of the book Blondel wishes to show " psychoanalysis in action." He gives detailed accounts from analytic literature of interpretations of dreams and of " symptomatic acts." He does not agree with psychoanalytic conclusions and ends this part by saying that it seems to him that a paranoic—paranoia is the *délire d'interprétation* of the French—" is, taken all in all, nothing but a psychoanalyst gone wrong " (p. 246). In his conclusion he compares Freud with Gall and Broussais, as belonging to the history of ideas and not to the history of science.

F. I. WERTHEIMER.

JOHNS HOPKINS HOSPITAL.

Theorie der Dialektik. Formenlehre der Philosophie. JONAS COHN. Leipzig: Felix Weiner. 1923. Pp. ix + 355.

Professor Cohn has given us a book for which both the proponents and opponents of the idealistic school have long been waiting; a book that sets forth clearly and rationally what the dialectic method of philosophizing is, what metaphysical notions it presupposes, and what sort of knowledge it professes to yield. These items constitute the chief message of the book for non-idealists. There is much else in it for the initiate Hegelian or semi-Hegelian (the author himself is of the latter order), but its uniqueness lies in the fact that it is not esoteric—it is, for the most part, comprehensible to the common herd of philosophers. Instead of plunging the poor Philistine reader headlong into a Witches' Sabbath of Selves positing themselves, negating themselves, transcending themselves,

and playing hide-and-go-seek with the Absolute, as the Post-Kantians have hitherto chosen to do, this writer devotes nearly one third of his book to an admirably lucid statement of the Hegelian logic. Being evidently quite clear in his own mind about the terms and postulates he employs, he makes no attempt to conciliate his opponents by vague words that leave room for various interpretations. His language invites the contrary-minded to take issue. Perhaps the most notable difference between this presentation and others from the same school is that Professor Cohn never scores a point by offering an analogy, a figure, a circumscription; he gives plenty of illustrations, but not in place of definitions. His definitions in bald logical terms can always be found.

The introductory first part puts the reader into a position to accept or reject the dialectic method. He who rejects it will not agree with the rest of the book, which is based on the assumption of its validity. But the idealist—by tradition or conversion—will find food for all sorts of thought, logical, epistemological, and metaphysical. The epistemology is Hegelian, yet does not lead the author to a Hegelian philosophy of the Absolute. It leaves him very decidedly in this imperfect finite world, in humanly insoluble difficulties of dialectic thought. Everywhere his metaphysical enthusiasm is checked by sober critical sense, which keeps a sharp lookout for non-philosophical material—thoughts born of ethical wishes, esthetic or intellectual preferences, religious hopes and needs. There is a kind of philosophical "conclusion" which is really an initial assumption that has sneaked into the system in the guise of a meekly dependent theorem. Such a one he recognizes in Hegel's famous dictum, that the Real equals the Rational. Nothing of the sort, he assures us, follows from dialectic logic or theory of knowledge; the Real is never exhausted, so the question of its ultimate nature can not be answered otherwise than by a dogmatic assertion. He refuses to accept so momentous a dogma, and at this point—the juncture of epistemology and metaphysics—he breaks with the master of his school. "Hegel's Titanic madness," he calls the intellectualist doctrine.

Of course, he himself is not free from debatable assumptions. Without some outfit of arbitrary terms one can not enter at the gate of metaphysics. But be it said to his credit that he announces most, if not all, of his accepted premises as they make their respective first appearances.

From his exposition it appears that dialectics, the terror of simple-minded logicians, is not essentially an unruly member, but is every thinker's humble servant. Psychologically, we all make use of it. Only its admission to the dignity of logic as well as psy-

chology is an innovation. Dialectics arises from the fact that, for purposes of deduction, we never divide our whole universe into *A* and non-*A*, where non-*A* includes everything except *A*. To make a distinction between mortals and immortals, the latter including chairs, unicorns, formulæ, and colors, would be impractical for the purpose of increasing knowledge. Mortals plus immortals equal living things, souls—for common sense, and *for the dialectician.* It follows, then, that thesis and antithesis are both positive concepts; the synthesis being a modification of both terms, a sort of social adjustment among concepts, enabling them to live peaceably together.

From this harmless theory the author goes on to more formidable ones. The two most interesting and fundamental of these he calls, respectively, the Principle of Utraquism (the essential duality of all objects of thought) and the Principle of Positivity (the denial of strictly negative concepts); these, he claims, demand a dynamic logic such as the dialecticians give us. The high lights of this logic might be summed up as follows: Not all logic is dialectic, nor does every science require dialectic treatment; but all problems of life and mind transcend the logic of pure implication, because this is a pattern of things that *are,* whereas the dialectic logic is a movement descriptive of things in their *becoming.* Because of its dynamic element, dialectics itself transcends the static common logic, so that a theory of dialectics is attainable only through a dialectic, not through a common logical process. (That is why the book can have no further meaning for one who from the outset rejects the method.) Dialectics is a principle inherent in every train of thought—in this psychological sense, however, the author speaks of "virtual" dialectics; if, on the other hand, it be found in the concepts underlying that train of thoughts, and in the Reality underlying the concept—that is to say, if the concept or its underlying Reality be *inconceivable* in any but dialectic terms—then we are dealing with "actual" dialectics.

Dialectics is essentially a characteristic of Mind; so that an "actually" dialectic philosophy is necessarily some form of idealism. But within this limited field there are two kinds of dialectics, which Cohn denotes as "unipolar" and "bipolar"; the "unipolar" is the Hegelian type, which is ultimately resolved into an undialectic Absolute, whereas the bipolar is a distinctly mundane affair which can no more reach the Absolute than any infinite series can reach its limit. In this latter kind of philosophy, "all dialectic thinking is thinking *toward* the Absolute, not thinking *of* the Absolute." Here the Absolute is taken to be an ideal of completed infinite thought.

The weakest part of the book, the part which exhibits some meaningless phrases and much traditional treatment, is toward the end, where the author allows himself to be decoyed into discussions of freedom and the "higher life." There are several passages throughout the second part, where the non-idealist, at least, fears the darkness of some deep transcendental jungle; but usually there is a clearing not far ahead where he may emerge once more into the light of common day. Altogether, the book offers a most admirable exposition of the dialectic method, the metaphysical concept of a dialectic world, the possibility and limits of dialectic knowledge. It certainly can give enlightenment to those who suspect a truth in the Hegelian logic, but find it hard to formulate—and still more to those who, after many excursions into the realms of the transcendental, must still admit that the word "dialectics" conveys nothing to them whatever.

SUSANNE K. LANGER.

WORCESTER, MASS.

The Ethics of Hercules. ROBERT CHENAULT GIVLER. New York: Alfred A. Knopf. 1924. Pp. 204.

The Ethics of Hercules is the expression of three motivating forces: a reaction against external and supernaturally imposed morality, an enthusiasm for scientific method, and a desire to share with others the stimulus which the author has found in the creed of behaviorism. Beginning with the assertion that ethical values are created by man's body "through the mechanisms of brain, sense-organ, muscle and glands," the author achieves, by means of a somewhat cumbrous apparatus, the definition of various ethical concepts in terms of "motor-tendencies." Thus the fundamental meaning of "good" is found to be the fact that the object thus designated "releases energy ready to be discharged"; bad "is applied to those things which inhibit action or destroy its coördination, or, in the more intense form of "evil," it refers to those objects or situations which "call forth energetic antagonistic reactions." In somewhat similar fashion the concept "right" describes "a behavior situation in which the dominant feature is the controlling and directing of human energies, . . . the attaining of any good whatsoever," and "wrong" refers to situations "where human energies can not be controlled and directed as desired." In the whole discussion, however, there is a subtle implication of underlying values which are not explicitly translated into physiological terms. It is implied that outgoing, coordinated reactions are preferable to inhibited or inchoate reactions, that clear thinking on these subjects is better than muddle-headedness or sentimentality, that the

"ethics of Hercules" is in some real sense more valuable than the vain longing for the unattainable which is characterized as the "ethics of Cinderella." Towards the end of the book the aim of scientific ethics is described as that of making possible for the whole human race a full development of talent, freedom of action, and peace of mind. One can not refrain from wondering whether for Professor Givler the value of these ideals is the fact that they "evoke a muscular response which he is ready to make," and, if so, whether the value and desirability of that kind of response is itself to be found in the fact that it arouses another muscular response of the same variety. The simple fact of difference between "outgoing reactions" and "withdrawing reactions" does not in itself provide any basis for preferring one to the other; but the dogmatic assertion that one thing is in itself better than another reintroduces those absolute values against which *The Ethics of Hercules* registers so vehement a protest.

As protest against obscurantism in ethics, against externality in morality, against the neglect of bodily needs and physical values in moral decision, *The Ethics of Hercules* has the advantage of a certain vividness of presentation and the carrying power of evident enthusiasm. As constructive theory, however, it is inadequate and incomplete, largely because of the inner contradiction suggested above.

FLORA I. MACKINNON.

UNIVERSITY OF TORONTO.

JOURNALS AND NEW BOOKS

REVISTA DE FILOSOFÍA. Año X, No. 3. Kant: *José Ingenieros.* Génesis del movimiento humanista: *J. V. González.* La nueva ideología política: *A. O. Quintana.* La rehumanización de la cultura cientifica: *H. F. Delgado.* La doctrina jurídica del neo-kantismo: *Arturo Orgaz.* La teoría de la relatividad de Einstein: *Jaime Zhitlovsky.* La biología contra Don Juan: *Aníbal Ponce.*

INTERNATIONAL JOURNAL OF ETHICS. Vol. XXXIV, No. 4. The Emergence of Naturalism: *R. W. Sellars.* Labor and the League: *C. D. Burns.* The League of Nations: a Process: *Adolfo Posada.* Security in Modern Life: *R. F. Swift.* Current Religious Thought and Modern Juristic Movements: *E. F. Albertsworth.* The Ethics of the Problem: *Norman Boardman.*

SCANDINAVIAN SCIENTIFIC REVIEW. Vol. III, No. 1. Greek Alexandrianism and Its Influence Upon Christian Thought: *Anathon Aall.* A New Form of Effluence or Radiation from the Human Or-

ganism: *Sidney Alrutz.* Control of the Physical Development of the Individual Child by Objective Methods: *Carl Schitz.* Psychological Criticism of a Contribution to Semantic Analysis and Theory: *G. A. Jaederholm.* The Adatability of a General Theorem to Statistics: *M. L. Reymert.* The Student Movement in Germany: *Otto Nieuwejaar.* The Present Status of Psychological Science in Different Countries: V. France: *Henri Pieron.*

PSYCHOLOGICAL REVIEW. Vol. 31, No. 4. Four Varieties of Behaviorism: *R. S. Woodworth.* A Behavioristic Account of Intellect and Emotions: *C. H. Woolbert.* The Unverbalized in Human Behavior: *J. B. Watson.* Intelligence Conceived as a Mechanism: *J. Peterson.* The Phenomenological Point of View: *P. T. Young.* A New View of Mental Development: *O. B. Gilchrist.* Notes on "False" Reactions: *F. L. Wells.* A Theory of Learning: *W. H. Pyle.* Attesting Psychologists for Public Service: *F. L. Wells.* A Further Observation on Cattle and Excitement from Blood: *H. C. Blodgett.*

BULLETIN DE LA SOCIÉTÉ FRANÇAISE DE PHILOSOPHIE: 23e Année, Nos. 3–4. Vocabulaire Philosophique: A à Axiome (2e édition). No. 5. Histoire et Philosophie: Thèse: M. Léon Brunschvicg. Discussion: MM. Appuhn, Beaulavon, Halévy, Parodi, Weber.

Bouyssonie, A.: Batailles d' Idées sur les Problèmes de Dieu, du Bien, du Vrai. Paris: Gabriel Beauchesne. 1923. 369 pp. 11 fr.

Brunhes, Gabriel: Christianisme et Catholicisme. Paris: Gabriel Beauchesne. 1924. xxix + 460 pp. 12 fr.

Busco, Pierre: Les Cosmogonies Modernes et la Théorie de la Connaissance. (Bibliothèque de Philosophie Contemporaine) Paris: Felix Alcan. 1924. 432 pp. 25 fr.

Carr, H. Wildon: The Scientific Approach to Philosophy. Selected Essays and Reviews. London: Macmillan & Co., Ltd. 1924. viii + 278 pp. 12/.

Durand, Alfred, translator and commentator. L'Évangile selon Saint Matthieu. (Verbum Salutis. Commentaires séparés des Quatre Évangiles, publiés sous la direction de Joseph Huley). Paris: Gabriel Beauchesne. 1924. xiv + 500 pp. 15 fr.

Janet, Charles. Le Volvox. Troisième Mémoire: Ontogénèse de la blastéa volvocéenne. Première partie. 179 pp. 35 fr.

Janet, Charles: Revendications. Limoges: Imprimerie et Librairie Limousines. 9 + XVI pp.

Ninde, Frederick Ward: The Application of the Auditory Memory Span Test to Two Thousand Institutional Epileptics. A Study in Relative Associability. (University of Pennsylvania). Westchester, Pa.: The Temple Press. 1924. 36 pp.

NOTES AND NEWS

Beginning with July 1, 1924, Herbert W. Schneider, Ph.D., Assistant Professor of Philosophy at Columbia University, will be associated with Professor Bush and Professor Woodbridge in the editorship of this JOURNAL.

Mr. S. McG. Butt, Instructor in Philosophy at Princeton University, has been appointed Assistant Professor of Philosophy at the University of North Carolina.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE will hold its 92d Annual Meeting in Toronto, Canada, from the 6th to the 13th of August. A cordial invitation is extended to all Americans and Canadians who are interested in Science to become members for this meeting. No technical qualifications are required for membership.

More than 500 leading British and European Scientists have signified their intention to be present at the meeting, which is organized in thirteen sections as follows:—Mathematics and Physics (including Meteorology), Chemistry, Geology, Zoology, Geography, Economics, Engineering, Anthropology, Physiology, Psychology, Botany, Education, and Agriculture. Recent advances in science will be discussed at the sectional meetings. In addition, many popular lectures will be delivered to members by leading scientists. Four "citizen's" lectures and three children's lectures will be open to the public, and free.

The meeting affords an exceptional opportunity for intercourse between American, British, Canadian, and European workers in science, and all who, while not engaged in scientific pursuits, are interested in the results of scientific endeavor. The fee for membership is five dollars and the membership ticket admits the holder to the sectional meetings, popular lectures, and to the receptions, local excursions, *etc.*, which are features of the meeting. Membership tickets may be obtained from the Local Secretary, Major J. M. Mood, Physics Building, University of Toronto, who will forward a preliminary programme on application and who will gladly supply any additional information desired.

CONDENSED PROGRAMME OF SECTION J, PSYCHOLOGY: The Presidential address of Section J will be delivered on Friday, August 8 at 2:00 P. M. by Professor William McDougall on "Purposive Action as a Fundamental Category in Psychology."

The following papers will be read:—

The Advantages and Limitations of Certain Types of Imagery": *T. H. Pear.*

"A Reconciliation of Theories of Emotion": *J. W. Bridges.*
"Feeling and Emotion in Daily Life": *J. C. Flugel.*
"Classification of Instincts": *William Tait.*
"Psychological Theories of Laughter": *J. Drever.*
"A Comparative Study of Ideational Processes and Intelligence": *J. P. Porter.*
"The Self in Cognition, Institution, Concept and Sensory Percept": *F. Aveling.*
"The Value of Mnemic Psychology for the Interpretation of Dreams and Other Data": *G. S. Brett.*
"A New Method of Stereoscopy with Applications to Motion Pictures": *E. A. Bott* and *S. F. N. Chant.*
"Some Phenomena of Graphic Interference": *A. A. Roback.*
"The Problem of Personality": *Morton Prince.*
"The Psychology of Deja Vu": *J. T. McCurdy.*
"Reverie and Industrial Fatigue": *Eldon Mayo.*
"Mental Hygiene as a National Enterprise": *C. M. Hincks.*
"Conscious and Unconscious Psychology": *J. Drever.*

Joint Discussion with Section I (Physiology) on "Physiological and Psychological Factors of Muscular Efficiency in Industry."

SPEAKERS: *C. Lovatt Evans*: "The Physiology of Muscular Contraction in Relation to Fatigue."
E. A. Bott: "Coördinate Volitional Action of Antagonistic Muscular Groups."
E. P. Cathcart: "Energy Exchange in Relation to Muscular Performance in Laboratory Investigations."
C. S. Myers: "Conceptions of Fatigue."
F. S. Lee: "Physical and Chemical Tests for Fatigue."

Joint Discussion with Section L (Education) on "Tests for Scholarship and Promotion."

SPEAKERS: *C. Burt*: "Tests for Scholarship and Promotions."
P. Sandiford, Brennand, and *Holmes*: "The Use of Partial Coefficients of Correlation in Educational Research."
B. R. Buckingham: "Tests for Scholarship and Promotion."

Joint Discussion with Section H (Anthropology) on "Racial Mental Difference."

SPEAKERS: *W. McDougall* and *C. S. Myers*: "Racial Mental Differences."
May Bore: "Racial Mental Differences in Children of School Age."

There will be a popular lecture by Professor William McDougall on "Human Heredity and National Outlook."

CONDENSED PROGRAMME OF SECTION H, (ANTHROPOLOGY). The Presidential Address of Section H will be delivered by Dr. F. C. Shrubsall.

The following papers will be read:

"The Historical School of Ethnology in America": *A. A. Goldenweiser.*

"Diffusion as a Criterion of Age": *W. D. Wallis.*

"The Segregation of Racial Characters in a Population": *C. Wissler.*

"Religious Complexes of the North American Indians": *R. F. Benedict.*

"The Relation of Industry and Social Condition to Cranial Types in Cleveland": (Lantern): *T. W. Todd.*

"New Trends in Anthropology (Lantern): *C. Hill-Tout.*

"Trephined Aboriginal Skulls from British Columbia and Washington": *H. I. Smith.*

"The Ancient Education of a Carrier Indian": *D. Jenness.*

"Aspects of the Potlach among the Bella Colla": *T. F. McIlwraith*

"The Privilege Concept among the Nootka Indians": *E. Sapir.*

"The Crests of a Tsimshian Family": *C. M. Barbeau.*

"Some Tribal Boundaries of the Montagnais and Naskapi of the Labrador Peninsula": *F. G. Speek.*

"Rank in Polynesia": *Margaret Mead.*

"The Red Paint People of Maine" (Lantern): *W. K. Moorhead.*

"A Tentative Characterization of Iroquoian Cultures in Ontario and Quebec, as Determined from Archaeological Remains": *W. J. Wintemberg.*

"An Analysis of the Ceremony of the First Salmon on the Pacific Coast": *E. G. Spier.*

"Composition in the Art of the West Coast Indians": *G. E. Rhoades.*

"Cultural Stability among the Mountain Whites of Tennessee": *Isabel Gordon.*

"The Antiquity of Man in America in the Light of Recent Discoveries": *A. Hrdlicka.*

"The Santa Barbara Skeletal Remains" (Lantern): *B. Oetteking.*

"The Dentition of the Dryopithecus and the Origin of Man": *W. K. Gregory* and *M. Hellma.*

"Recent Discoveries in Italy": *T. Ashbey.*

"Anthropology and the Administration of the Affairs of Native Races": *Henry Balfour.*

"Recent Archaeological Discoveries in the Valley of Mexico": *Zelia Nutall.*

"The Distribution of Early Man": *A. C. Haddon.*

"The Cinematograph an Instrument of Anthropology": *R. R. Marett.*

"Ancient Crania from the Valley of Mexico": *L. H. Dudley Buxton.*